

Claims

- [001] A method for controlling access to logical units, a logical unit being an addressable entity that accepts commands, wherein a plurality of logical units are accessible by one or more ports, a port being an addressable entity that sends commands, the method comprising: grouping together (401) as a named set (301, 302, 303) in a first location one or more ports that require access to the same logical units; associating (402) in a subsequent location a named set with selected logical units (304); and extracting (403) at the subsequent location identification information for the one or more ports by referencing the name of the named set.
- [002] A method as claimed in claim 1, wherein the logical units are in a storage device and the access is via a storage area network (102, 202).
- [003] A method as claimed in claim 2, wherein the storage area network (102, 202) uses the SCSI protocol.
- [004] A method as claimed in claim 3, wherein the storage area network (102, 202) comprises a Fibre Channel interface.
- [005] A method as claimed in any one of the preceding claims, wherein the step of grouping together (401) one or more ports is carried out by physically connecting the ports together as a named set and providing a locating address for the named set.
- [006] A method as claimed in any one of claims 1 to 4, wherein the step of grouping together (401) one or more ports is carried out by logically identifying the ports in a set.
- [007] A method as claimed in any one of the preceding claims, wherein the method includes the step of associating (402) in a plurality of subsequent locations.
- [008] A method as claimed in any one of the preceding claims, wherein the identification information for the ports in the association of the named set with the selected logical units is dynamically changed in response to changes in the port configurations.
- [009] A method as claimed in any one of the preceding claims, wherein the logical units are identified by logical unit numbers.
- [010] An apparatus for controlling access to logical units, comprising: a plurality of logical units, a logical unit being an addressable entity that accept commands; one or more ports, a port being an addressable entity that sends commands; a

communication means providing access to the plurality of logical units by the one or more ports; a means at a first location for grouping the one or more ports that require access to the same logical units in a named set (301, 302, 303); a controlling means at a subsequent location for controlling access to the logical units by associating (300) a named set (301, 302, 303) with selected logical units (304); and an extracting means at the subsequent location for extracting identification information for the one or more ports by referencing the name of the named set.

- [011] An apparatus as claimed in claim 10, wherein the logical units are in a storage device (106, 206) and the communication means is a storage area network (102, 202).
- [012] An apparatus as claimed in claim 10 or claim 11, wherein the means for grouping the one or more ports physically connects the ports together as a named set and provides a locating address for the named set.
- [013] An apparatus as claimed in claim 12, wherein the means for grouping the one or more ports is a Fibre Channel switch (212).
- [014] An apparatus as claimed in claim 10 or claim 11, wherein the means for grouping the one or more ports logically connects the ports by port identification information..
- [015] An apparatus as claimed in any one of claims 10 to 14, wherein there are provided a plurality of subsequent locations.
- [016] An apparatus as claimed in any one of claims 10 to 15, wherein the means for associating the identification information with the selected logical units includes a service means for changing the identification information in response to changes in the port configurations.
- [017] An apparatus as claimed in any one of claims 10 to 16, wherein the controlling means is a storage controller (210).
- [018] An apparatus as claimed in any one of claims 10 to 16, wherein the controlling means is an independent software agent.
- [019] An apparatus as claimed in any one of claims 10 to 18, wherein each logical unit has a logical unit number.
- [020] An apparatus as claimed in claim 17, wherein a storage controller (210) can act as back up storage by associating all ports of the storage controller in all named sets and selecting which named set the logical units are associated with.
- [021] A computer program product stored on a computer readable storage medium

comprising computer readable program code means for controlling access to logical units, a logical unit being an addressable entity that accepts commands, wherein a plurality of logical units are accessible via a network by one or more ports, a port being an addressable entity that sends commands, the code means performing the steps of: grouping together (401) as a named set (301, 302, 303) in a first location one or more ports that require access to the same logical units; associating (402) in a subsequent location a named set (301, 302, 303) with selected logical units (304); and extracting (403) at the subsequent location identification information for the one or more ports by referencing the name of the named set.